

U.S. Army Long-Term Monitoring Developments



Presented by:

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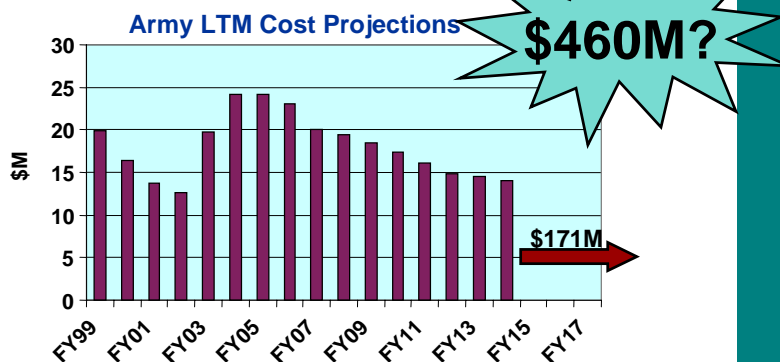
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Concern



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Army Cleanup Technology Requirements

Rank Title

- 1 UXO Detection and Identification
- 2 Enhanced Alternative and In-Situ Treatment Technologies for Explosives and Organics in Groundwater
- 3 Enhanced Alternative and In-Situ Treatment Technologies for Inorganics in Groundwater
- 4 Develop Data and Model Integration Tool to Support Risk/Hazard Assessment, Fate/Effects, and Transport Predictability Models for Military Unique Compounds, Explosives, and DU
- 5 Innovative In-Situ and/or On-site Ex-Situ Treatment Technologies for Soils Contaminated with Inorganics
- 6 Develop Standard Analytical and Monitoring Techniques for Military Unique Compounds**

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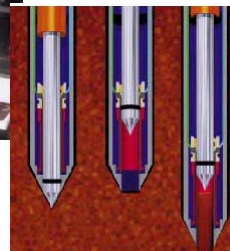
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Technology Hopes

- Transfer of Investigative Technology Innovations (SCAPS Sensors)
 - Hydrosparge VOC sensor / Ion Trap Mass Spectrometer
 - Ion Trap Mass Spectrometer – Membrane Interface Probe



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Technology Hopes

- Smarter Characterization Methods
 - Hydropunches™ to minimize monitoring wells



- Use Technologies that Minimize Waste
 - Microwells
 - Low Flow Sampling

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Army Focusing on LTM Optimization

- Design to Meet LTM Objectives
 - Avoid carrying over monitoring requirements from investigation
 - Match sample type, quantity, frequency, and quality with LTM objectives
 - Incorporate exit strategies into monitoring
- Redesign to Meet Changing Conditions
 - Periodic review of monitoring data needs (type, quantity, frequency, quality)
 - Avoid scope propagation (“worked last year, let’s do it again”)
 - Implement exit strategies
- Other possible Cost Minimizing Efforts
 - Monitor only plume indicators (specific analyte, physical property)
 - Lower data quality requirements until decision points

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Summary

- The Army is concerned over large LTM bill
- In view of much higher UXO bill, technology priority is not LTM
- Army views LTM optimization as easy, high payback effort